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State of Utah

DEPARTMENT OF NATURAL RESOURCES

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Executive Director

Division of Water Rights

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July 16, 2008

Daryl Devey
Central Utah Water Conservancy District
355 W University Parkway
Orem UT 84058-7303

Tom Bruton
Central Utah Water Conservancy District
PO Box 2
Duchesne UT 84021

Re: Determining Reservoir Evaporation for Water Regulation and Distribution System
Operation Purposes

Gentlemen:

Central Utah Water Conservancy District (CUWCD) has made an effort over the past few years to determine if there was a method for determining reservoir evaporation that would be better than the Bureau of Reclamation method. The Bureau method has been used by the Provo River water commissioner for many years in his calculations of the natural flow of the river and there were some concerns about its accuracy.

Specifically, CUWCD has investigated and used a method known as the Morton Model for the past several years to see if it could be used to provide better evaporation data. CUWCD's research and use of the Morton model indicated that it might provide slightly more accurate data, however, their experience also determined that the model was cumbersome and difficult to use because of the amount of data required to operate the model.

In discussions between the District and the Division of Water Rights, it was decided that the difficulty of operating the model outweighed any improvement it provided in data quality. We concluded that although the Bureau method may produce evaporation data that is not as accurate as the Morton model, the Bureau method data is accurate enough. There are other factors that have a greater influence on the calculation of the natural flow of the river than reservoir evaporation so the small increase in evaporation accuracy does not justify the amount of effort required to obtain it. Further, the data required for the Bureau method is easily obtainable, and the Provo River water commissioner has used it for a number of years and is familiar with it.

Therefore, the Morton model will not be used in calculating the natural flow of the river for water regulation and distribution system operation purposes on either the



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Provo River or the Duchesne and Strawberry Rivers. Instead, the water commissioners on both river systems will continue to use the Bureau method.

If you have any questions regarding this decision please contact me by phone at 801-538-7380 or by e-mail at LeeSim@utah.gov.

Respectfully,

A handwritten signature in dark ink, appearing to read 'Lee H. Sim', with a large, stylized loop at the beginning.

Lee H. Sim, P.E.

Assistant State Engineer for Field Services

cc: John Mann, Regional Engineer
Bob Leake, Regional Engineer
Sue Odekirk, Distribution Engineer
Mike Silva, Distribution Engineer
Stan Roberts, Water Commissioner
John Swasey, Water Commissioner